

CLAIMS:

1. (currently amended) A system for remotely activating a deployed device, the deployed device having a load and a battery, the system comprising:
 - (a) a transmitter, remote from the deployed device, for generating an AC magnetic field; and
 - (b) a receiver disposed at the deployed device, the receiver including
 - (i) an antenna and a voltage detector coupled to said antenna for sensing the AC magnetic field and generating an output signal in response to the sensed AC magnetic field, wherein said voltage detector only generates said output signal when the sensed AC magnetic field induces a voltage in said antenna and said voltage exceeds a threshold voltage;
 - (ii) a switch coupled in series with the load and the battery; and
 - (iii) an integrating delay circuit coupled between the voltage detector and said switch for integrating the output signal, said switch being responsive to said integrating delay circuit to couple the battery to the load, thereby activating the deployed device,

and wherein said voltage detector includes at least one semiconductor device, said semiconductor device having a cutoff mode and an active mode, and wherein said semiconductor device operates in said cutoff mode when said induced voltage is below the threshold voltage, and operates in said active mode when said induced voltage is above the threshold voltage.

2. (original) The system as claimed in claim 1, wherein the AC magnetic field has a predetermined frequency and the antenna is a tuned antenna tuned to the predetermined frequency.
3. (cancelled)
4. (cancelled)
5. (cancelled)
6. (cancelled)
7. (cancelled)
8. (cancelled)
9. (previously amended) The system as claimed in claim 1, wherein said voltage detector includes a first transistor having its base-emitter junction coupled in parallel with said antenna, and a second transistor having its base

coupled to the collector of said first transistor, and wherein the collector of said second transistor is coupled to said integrating delay circuit and provides said output signal.

10. (cancelled)

11. (cancelled)

12. (original) The system as claimed in claim 9, wherein the emitter of said first transistor is coupled to a terminal of the battery and the emitter of said second transistor is coupled to an opposing terminal of the battery.

13. (original) The system as claimed in claim 9, wherein said first transistor is an NPN transistor and said second transistor is a PNP transistor.

14. (original) The system as claimed in claim 9, wherein said first transistor is a PNP transistor and said second transistor is an NPN transistor.

15. (currently amended) The system as claimed in claim 1, wherein said switch includes a semiconductor device, and wherein said semiconductor device has an active mode and a cutoff mode, and wherein said semiconductor device couples the load to the battery when in said active mode, and decouples the load from the battery when in said cutoff mode.

16. (cancelled)

17. (original) The system as claimed in claim 1, wherein said switch is selected from the group including a field effect transistor, a bipolar junction transistor, and a relay.

18. (cancelled)

19. (previously amended) The system as claimed in claim 1, wherein said voltage detector senses the AC magnetic field when said transmitter is up to 100 meters distant from said receiver.

20. (original) The system as claimed in claim 1, wherein said receiver consumes less than 100 nW of power when said switch is open.

21. (currently amended) A device for remote deployment, having both an active mode and a standby mode, the device switching from the standby mode to the active mode in response to the sensing of an AC magnetic field transmitted from a remote transmitter, the device comprising:

(a) a load;

(b) a battery; and

(c) a receiver including

(i) an antenna and a voltage detector coupled to said antenna for sensing the AC magnetic field and for generating an output signal in

response to the sensed AC magnetic field, wherein said voltage detector only generates said output signal when the sensed AC magnetic field induces a voltage in said antenna and said voltage exceeds a threshold voltage;

(ii) a switch coupled in series with the load and the battery; and

(iii) an integrating delay circuit coupled between the voltage detector and said switch for integrating the output signal, said switch being responsive to said integrating delay circuit to couple the battery to the load, thereby activating the deployed device,
wherein said voltage detector includes at least one semiconductor device, said semiconductor device having a cutoff mode and an active mode, and wherein said semiconductor device operates in said cutoff mode when said induced voltage is below the threshold voltage, and operates in said active mode when said induced voltage is above the threshold voltage.

22. (original) The device as claimed in claim 21, wherein the AC magnetic field has a predetermined frequency and the antenna is a tuned antenna tuned to the predetermined frequency.

23. (original) The device as claimed in claim 22, wherein the tuned antenna includes an induction coil and a tuning capacitor.

24. (cancelled)

25. (cancelled)

26. (cancelled)

27. (cancelled)

28. (cancelled)

29. (previously amended) The device as claimed in claim 21, wherein said voltage detector includes a first transistor having its base-emitter junction coupled in parallel with said antenna, and a second transistor having its base coupled to the collector of said first transistor, and wherein the collector of said second transistor is coupled to said integrating delay circuit and provides said output signal.

30. (cancelled)

31. (cancelled)

32. (original) The device as claimed in claim 29, wherein the emitter of said first transistor is coupled to a terminal of said battery and the emitter of said second transistor is coupled to an opposing terminal of said battery.

33. (original) The device as claimed in claim 29, wherein said first transistor is an NPN transistor and said second transistor is a PNP transistor.

34. (original) The device as claimed in claim 29, wherein said first transistor is a PNP transistor and said second transistor is an NPN transistor.

35. (currently amended) The device as claimed in claim 21, wherein said switch includes a semiconductor device, and wherein said semiconductor device has an active mode and a cutoff mode, and wherein said semiconductor device couples said load to said battery when in said active mode, and decouples said load from said battery when in said cutoff mode.

36. (cancelled)

37. (previously amended) The device as claimed in claim 21, wherein said switch is selected from the group including a field effect transistor, a bipolar junction transistor, and a relay.

38. (cancelled)

39. (previously amended) The device as claimed in claim 21, wherein said voltage detector senses the AC magnetic field when the transmitter is up to 100 meters distant from said receiver.

40. (previously amended) The device as claimed in claim 21, wherein said receiver consumes less than 100 nW of power when said switch is open.

41. (cancelled)

42. (cancelled)

43. (cancelled)

44. (cancelled)

45. (cancelled)

46. (cancelled)

47. (cancelled)

48. (previously presented) The system claimed in claim 1, wherein said voltage detector and said switch are configured to draw no bias current from the battery when in a standby mode, and wherein the receiver draws only semiconductor leakage currents from the battery when in said standby mode.

49. (previously presented) The system claimed in claim 1, wherein said voltage detector includes a rectifying transistor and an amplifying transistor, and wherein said transistors are configured to draw no bias current in the absence of said voltage exceeding said threshold voltage.

50. (previously presented) The system claimed in claim 1, wherein said integrating delay circuit comprises a resistor and a capacitor and configured to prevent operation of said switch until said AC magnetic field is received for at least a predetermined duration.

51. (previously presented) The device claimed in claim 21, wherein said voltage detector and said switch are configured to draw no bias current from the battery when in a standby mode, and wherein the receiver draws only semiconductor leakage currents from the battery when in said standby mode.

52. (previously presented) The device claimed in claim 21, wherein said voltage detector includes a rectifying transistor and an amplifying transistor, and wherein said transistors are configured to draw no bias current in the absence of said voltage exceeding said threshold voltage.

53. (previously presented) The device claimed in claim 21, wherein said integrating delay circuit comprises a resistor and a capacitor and configured to prevent operation of said switch until said AC magnetic field is received for at least a predetermined duration.

54. (previously presented) A deployable device, comprising a load, a battery, and a passive inductive switch for selectively coupling the load to the battery in response to a received AC magnetic field, the passive inductive switch comprising:

a tuned antenna

a voltage detector connected across the tuned antenna for receiving and rectifying AC electrical signals induced in the tuned antenna by the AC magnetic field, wherein the voltage detector comprises a first

semiconductor junction having at least one terminal connected to the battery and operating in cutoff mode unless said electrical signals exceed a threshold voltage whereupon the voltage detector outputs a rectified AC output;

an integrating delay circuit connected to the voltage detector for receiving the rectified AC output and for integrating the rectified AC output to provide an integrated voltage signal; and

a semiconductor switch connected in series between the battery and the load for selectively coupling the load to the battery, and connected to the integrating delay circuit, whereby the switch comprises a normally-open switch configured to connect the load to the battery in response to the integrated voltage signal,

wherein the voltage detector and semiconductor switch draw no bias currents from the battery when in a standby mode, and wherein the passive inductive switch draws only semiconductor leakage currents from the battery when in said standby mode.

55. (previously presented) The device as claimed in claim 54, wherein said voltage detector includes a first transistor having its base-emitter junction coupled in parallel with said antenna, and a second transistor having its base coupled to the collector of said first transistor, wherein the collector of said second transistor is coupled to said integrating delay circuit and provides said

output signal, and wherein the emitter of said second transistor is connected to a terminal of the battery.

56. (previously presented) The device claimed in claim 55, wherein the base of said first transistor is connected solely to said tuned antenna and remains in said cutoff mode in the absence of said electrical signals exceeding said threshold voltage.

57. (previously presented) The device claimed in claim 56, wherein said second transistor is configured to remain in a cutoff state and adapted to enter an active state when said first transistor enters an active state.

58. (previously presented) The device claimed in claim 55, wherein said integrating delay circuit comprises a first resistor, a second resistor, and a capacitor, wherein said second resistor and said capacitor are connected in parallel, said first resistor is connected between the collector of said second transistor and one terminal of the capacitor, wherein the other terminal of the capacitor is connected to ground, and wherein said integrated voltage signal is output from said one terminal.

59. (previously presented) The device claimed in claim 54, wherein the load comprises activation electronics for a weapon.